

REMARKS

Claims 23-38 and 40-51 are currently pending. Claims 49-51 have been amended. Claim 52 has been added. With entry of this amendment, claims 23-38 and 40-52 will be pending.

Claims 23-25, 27-28, 31, 33-34 and 49 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,744,993 issued to Bisson ("Bisson"). Claims 26, 29-30, 32, 35-38, 40-48 and 50-51 were rejected by 35 U.S.C. § 103(a) as being unpatentable over Bisson in view of U.S. Patent No. 3,989,853 issued to Forkner ("Forkner"). The Applicant respectfully traverses each of these rejections.

Independent Claim 23

As discussed during the interview, Bisson does not teach or suggest, among other things, "passing a soft expanded foodstuff composition at a first temperature and a first pressure into a setting region." In other words, Bisson does not teach or suggest an expanded foodstuff composition that becomes an expanded foodstuff.

With respect to Bisson: 1) The material is extruded into a region of atmospheric pressure and subsequently enters the reduced pressure enclosure; or 2) The reduced pressure enclosure receives the extruded strand directly from the extruder.

In case 1, there is no expansion of the material through the extruder up to the point where extrusion into sub-atmospheric pressure takes place. The Applicant respectfully disagrees with the Examiner's contention that "[t]he fact that the ingredients are cooked and plastic means that some expansion takes place," and that "[t]he turning of the flaky food ingredients to a strand of paste-like material inherently means that expansion takes place." Office action, page 4. The processes of cooking, plasticizing and expanding are totally unrelated, and accordingly, no such inference should be made. In fact, the converse is more likely to be true. In other words, Bisson's material that is input into the extruder is a flaky material having a low density that is softened and pressurized in the extruder. This will inevitably result in the material being compressed and not expanded. Therefore, in Bisson expansion takes place not twice, but once.

In case 2, as with case 1, no expansion occurs within the extruder and furthermore no expansion occurs on exiting the extruder if the pressure downstream of the exit nozzle is atmospheric. The only way for expansion to occur would be if water were to be evaporated from the extrudate. This cannot occur under the conditions disclosed in Bisson, namely, "100° C.

[being] the upper limit beyond which the casein loses its functional and nutritional properties and the grains take on an unacceptable hardened appearance after puffing.” Bisson, col. 2, line 68 to col. 3, line 3.

Accordingly, claim 23 is allowable. Reconsideration and allowance of claim 23 are respectfully requested.

Dependent Claim 24

Dependent claim 24 depends from allowable claim 23, and contains additional patentable subject matter. Dependent claim 24 specifies that the first temperature is in the range of 70 to 150°C. Bisson discloses an extrusion temperature, wherein “100° C. is the upper limit beyond which the casein loses its functional and nutritional properties and the grains take on an unacceptable hardened appearance after puffing.” But the Applicant’s first temperature range is not an extrusion temperature. It is the temperature from which the already expanded foodstuff composition is passed into the setting region for further expansion.

Accordingly, claim 24 is allowable. Reconsideration and allowance of claim 24 are respectfully requested.

Dependent Claim 49

Dependent claim 49 depends from allowable claim 23, and contains additional patentable subject matter. Particularly, dependent claim 49 specifies that the first temperature is greater than 100 to 150° C. Nowhere in Bisson is a temperature in excess of 100° C even mentioned. In fact, Bisson teaches away from this for the reasons set forth in claim 24, namely, loss in functional and nutritional properties and unacceptable hardening. Plus, again, Bisson’s temperature up to 100° C is an extrusion temperature.

Accordingly, claim 49 is allowable. Reconsideration and allowance of claim 49 are respectfully requested.

Independent Claim 36

As discussed during the interview, Bisson and Forkner, taken separately or combined, do not teach or suggest, among other things, “passing a foodstuff composition which is in at least a partially expanded condition and in a plastic state and is therefore capable of further expansion

or contraction and which contains a vaporisable expanding agent at a first temperature and a first pressure into a setting region. The setting region has a second temperature lower than the first temperature and a second pressure lower than the first pressure.

With respect to Bisson: 1) The material is extruded into a region of atmospheric pressure and subsequently enters the reduced pressure enclosure; or 2) The reduced pressure enclosure receives the extruded strand directly from the extruder.

In case 1, there is no expansion of the material through the extruder up to the point where extrusion into sub-atmospheric pressure takes place. The Applicant respectfully disagrees with the Examiner's contention that "[t]he fact that the ingredients are cooked and plastic means that some expansion takes place," and that "[t]he turning of the flaky food ingredients to a strand of paste-like material inherently means that expansion takes place." Office action, page 4. The processes of cooking, plasticizing and expanding are totally unrelated, and accordingly, no such inference should be made. In fact, the converse is more likely to be true. In other words, Bisson's material input in to the extruder is a flaky material having a low density that is softened and pressurized in the extruder. This will inevitably result in the material being compressed and not expanded.

In case 2, as with case 1, no expansion occurs within Bisson's extruder and furthermore no expansion occurs on exiting the extruder if the pressure downstream of the exit nozzle is atmospheric. The only way for expansion to occur would be if water were to be evaporated from the extrudate. This cannot occur under the conditions disclosed in Bisson, namely, "100° C. [being] the upper limit beyond which the casein loses its functional and nutritional properties and the grains take on an unacceptable hardened appearance after puffing." Bisson, col. 2, line 68 to col. 3, line 3. Bisson's temperature range is the extrusion temperature range. The Applicant's first temperature range is not an extrusion temperature. It is the temperature from which the already expanded foodstuff is passed into the setting region for further expansion.

Forkner does not cure this deficiency. The Examiner is only relying on Forkner to teach the deficiencies of Bisson, which the Examiner identified as being "using a belt conveyor, add[ing] a chemical expanding agent, the foodstuff is a confectionary, forming the composition into balls and the second temperature being lower than the first temperature." The Applicant in no way concedes that Forkner discloses these elements. With respect to claim 36, Forkner does not cure Bisson's deficiencies.

Accordingly, claim 36 is allowable. Reconsideration and allowance of claim 36 are respectfully requested.

Dependent Claim 37

Dependent claim 37 depends from allowable claim 36, and contains additional patentable subject matter. Particularly, claim 37 specifies said vaporisable expanding agent being selected from supercritical carbon dioxide or nitrogen, or water. As the Examiner concedes, Bisson does not disclose adding “a chemical expanding agent.” Office action, page 3. Forkner does not cure this deficiency. Forkner only discloses that “[e]xpansion may be promoted by including small amounts of sodium bicarbonate in the formulation, whereby expansion is aided by gas formation.” Forkner, col. 6, lines 45-49. Carbon dioxide, nitrogen and water are not mentioned. Moreover, one of skill in the art would not be motivated to combine Bisson and Forkner for the same reasons set forth in the response to the previous Office action. Consequently, a *prima face* case of obviousness has not been established.

Accordingly, claim 37 is allowable. Reconsideration and allowance of claim 37 are respectfully requested.

Dependent Claim 38

Dependent claim 38 depends from allowable claim 36, and contains additional patentable subject matter. Dependent claim 38 specifies that the first temperature is in the range of 70 to 150°C. Bisson discloses an extrusion temperature, wherein “100° C. is the upper limit beyond which the casein loses its functional and nutritional properties and the grains take on an unacceptable hardened appearance after puffing.” But the Applicant’s first temperature range is not an extrusion temperature. It is the temperature from which the already expanded foodstuff is passed into the setting region for further expansion.

Accordingly, claim 38 is allowable. Reconsideration and allowance of claim 38 are respectfully requested.

Dependent Claim 50

Dependent claim 50 depends from allowable claim 38, and contains additional patentable subject matter. Particularly, dependent claim 50 specifies the first temperature being greater than

100 to 150° C. For the same and similar reasons as set forth with respect to claim 24, claim 50 is allowable.

Accordingly, claim 50 is allowable. Reconsideration and allowance of claim 50 are respectfully requested.

Independent Claim 48

As discussed during the interview, Bisson and Forkner, taken separately or combined, do not teach or suggest, among other things, passing a foodstuff composition which is in at least a partially expanded condition and in a plastic state and is therefore capable of further expansion or contraction and which contains a vaporisable expanding agent, at a first temperature and substantially atmospheric pressure into a setting region at a second temperature, said second temperature being lower than said first temperature.

With respect to Bisson: 1) The material is extruded into a region of atmospheric pressure and subsequently enters the reduced pressure enclosure; or 2) The reduced pressure enclosure receives the extruded strand directly from the extruder.

In case 1, there is no expansion of the material through the extruder up to the point where extrusion into sub-atmospheric pressure takes place. The Applicant respectfully disagrees with the Examiner's contention that "[t]he fact that the ingredients are cooked and plastic means that some expansion takes place," and that "[t]he turning of the flaky food ingredients to a strand of paste-like material inherently means that expansion takes place." Office action, page 4. The processes of cooking, plasticizing and expanding are totally unrelated, and accordingly, no such inference should be made. In fact, the converse is more likely to be true. In other words, Bisson's material input in to the extruder is a flaky material having a low density that is softened and pressurized in the extruder. This will inevitably result in the material being compressed and not expanded.

In case 2, as with case 1, no expansion occurs within Bisson's extruder and furthermore no expansion occurs on exiting the extruder if the pressure downstream of the exit nozzle is atmospheric. The only way for expansion to occur would be if water were to be evaporated from the extrudate. This cannot occur under the conditions disclosed in Bisson, namely, "100° C. [being] the upper limit beyond which the casein loses its functional and nutritional properties and the grains take on an unacceptable hardened appearance after puffing." Bisson, col. 2, line 68 to

col. 3, line 3. Bisson's temperature range is the extrusion temperature range. The Applicant's first temperature range is not an extrusion temperature. It is the temperature from which the already expanded foodstuff is passed into the setting region for further expansion.

Forkner does not cure this deficiency. The Examiner is only relying on Forkner to teach the deficiencies of Bisson, which the Examiner identified as being "using a belt conveyor, add[ing] a chemical expanding agent, the foodstuff is a confectionary, forming the composition into balls and the second temperature being lower than the first temperature." The Applicant in no way concedes that Forkner discloses these elements. With respect to claim 48, Forkner does not cure Bisson's deficiencies.

Accordingly, claim 48 is allowable. Reconsideration and allowance of claim 48 are respectfully requested.

Dependent Claim 51

Dependent claim 51 depends from allowable claim 48, and contains additional patentable subject matter. Particularly, dependent claim 51 specifies the first temperature being greater than 100 to 150° C. For the same and similar reasons as set forth with respect to claim 24, claim 51 is allowable.

Accordingly, claim 51 is allowable. Reconsideration and allowance of claim 51 are respectfully requested.

New Independent Claim 52

New independent claim 52 recites a process for setting an expanded foodstuff, comprising the steps of:

partially expanding a foodstuff composition;

extruding the expanded foodstuff composition into a region having a first temperature in the range of 70 to 150°C and a first pressure, the extruding occurring after the partial expanding;

passing the foodstuff composition into a setting region having a second temperature, said second temperature being lower than said first temperature; and

cooling and setting said expanded foodstuff composition in the setting region at a second pressure which is lower than said first pressure to further expand the foodstuff.

Support for new claim 52 can be found, among other places, on page 3, second two paragraphs and page 5, last three paragraphs.


Bisson and Forkner, taken separately or combined, do not teach or suggest the subject matter of independent claim 52. Among other things, neither of these references discloses partial expansion of a foodstuff followed by subsequent expansion in a setting region, between which a region exists having a first temperature in the range of 70 to 150°C. Bisson does not use a region having this first temperature range. Again, Bisson's maximum temperature of 100° C is an extrusion temperature, and not a temperature in the first temperature range. Forkner fails to cure these deficiencies.

Therefore new claim 52 is allowable. Consideration and allowance of claim 52 are respectfully requested.

CONCLUSION

In view of the foregoing, allowance of the application is respectfully requested. Should any issues remain, the Examiner is encouraged to contact the undersigned at the number listed below.

Respectfully submitted,



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